

TOILET WITH SELF-CONTAINED VENTILATION SYSTEM

CLAIMS

1. A toilet, comprising:
 - a) a bowl having a drain channel extending from the bowl, the bowl and drain channel having a water trap, the bowl having an upper rim, which upper rim has an upper rim duct, the upper rim duct communicates with the bowl by openings;
 - b) a water tank located above the bowl, the tank having an aperture that is in fluid communication with the upper rim duct;
 - c) the aperture in the water tank being covered by a base member in the water tank, the base member having a flapper valve that permits flushing of the bowl when opened;
 - d) a vent pipe extending from the base member, out of the water tank and to a location of the drain channel that is downstream of the water trap;
 - e) a fan in line with the vent pipe;
 - f) the vent pipe having a one-way valve therein to prohibit gases from downstream of the water trap from entering the bowl by way of the vent pipe;
 - g) the portion of the vent pipe that is in the water tank having a float valve therein, the float valve located at a predetermined height inside the water tank, wherein when the water inside the tank

reaches the predetermined height, the float valve opens and allows the water to drain into the vent pipe and into the bowl.

2. The toilet of claim 1 wherein the vent pipe has an inside diameter of at least one inch.
3. The toilet of claim 1 further comprising a fitting where the vent pipe enters the drain channel, the fitting allowing the vent pipe to be removably coupled thereto.
4. The toilet of claim 1 wherein the one-way valve is a flapper valve located on an end of the vent pipe in the drain channel.
5. The toilet of claim 1 wherein the vent pipe is at least partially positioned in-line with the water tank aperture to provide for volumes of air to be removed from the bowl.